

## **REMARKS**

### **I. INTRODUCTION**

Claims 1 and 9 have been amended. No new matter has been added. Thus, claims 1-9 are pending in the present application. In view of the above amendment and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable.

### **II. THE 35 U.S.C. § 112 REJECTIONS SHOULD BE WITHDRAWN**

Claims 1-9 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. (See 09/05/2007 Office Action p. 2).

The Examiner asserts that “said analysis yielding a result,” as recited in claims 1 and 9, does not have any support in the specification and thus constitutes new matter. Applicants respectfully disagree. Applicants respectfully submit that at least the disclosure in the Specification stating “The value,  $\Delta(p)$ , can be presented to the user in any known way, to allow the user to assess the accuracy and reliability of the *quantitative result of the medical image analysis process*” describes the recited “said analysis yielding a result.” (See Specification, p. 8, ll. 6-8). Therefore, Applicants submit that the limitations of claims 1 and 9 are described within the specifications and the 35 U.S.C. § 112 rejections should be withdrawn.

### **III. THE 35 U.S.C. § 103(a) REJECTIONS SHOULD BE WITHDRAWN**

Claims 1 and 9 stand rejected under 35 U.S.C. § 103(a) as being anticipated by U.S. Patent No. 5,648,652 to Sekiya et al. (hereinafter “Sekiya”) in view of U.S. Patent No. 6,083,167 to Fox et al. (hereinafter “Fox”). (See 09/05/2007 Office Action, p. 3-4). Applicants respectfully disagree.

Sekiya teaches a method and apparatus to evaluate the best image plane position for an optical lens system. (See Sekiya Abstract). Additionally, Sekiya describes an evaluation method for an optical system which uses a repeated pattern. (See Sekiya col. 3, ll. 54-56).

Fox teaches a system and method for the prevention of restenosis using radiation to treat blood vessels. (See Fox Abstract). In Fox, an intravascular ultrasound system acquires precise two-dimensional images of a treatment volume to obtain precise measurements of distance between the radiation source and the lesion. (See Fox Abstract).

Claim 1 recites, “deriving a quantitative evaluation including a difference between an ideal image unaffected by artefacts and the at least one medical image affected by artefacts.” The Examiner admits that Sekiya does not teach “the deriving of the quantitative equation.” (See 09/05/2007 Office Action, p. 4). However, the Examiner asserts that this recitation is taught by Fox in column 17, line 7-8, “deriving a quantitative dose evaluation of the dose data with the image data.” (See 09/05/2007 Office Action, p. 4). Fox utilizes an IVUS to produce an image in an image plane. (See Fox, col. 7, ll. 21-23, 30-31). The IVUS produces digital image data. (See Fox, col. 7, ll. 58-60). Fox then derives a quantitative dose evaluation of the dose data with the image data. (See Fox, col. 17, ll. 7-8). However, the quantitative dose evaluation performed by Fox is not based on “a difference between an ideal image unaffected by artefacts and the at least one medical image affected by artefacts” as recited in claim 1. In fact, there is no teaching or suggestion in Fox of an ideal image that is unaffected by artefacts. Fox merely teaches the production of images in an image plane that are generally normal to the axial direction of the catheter. (See Fox, col. 7, ll. 30-32). Accordingly, Applicants respectfully submit that claim 1 is patentable over Sekiya either alone or in combination with Fox.

Claim 9 recites, “a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps, for a medical image analysis process which utilizes information contained in at least one medical image, the method steps comprising: deriving a quantitative evaluation including a difference between an ideal image unaffected by artefacts and the at least one medical image affected by artefacts delivering the quantitative evaluation as an output, performing an error analysis in order to provide

information relating to the accuracy of the quantitative evaluation, said analysis yielding a result, and, delivering the result as a further output.” Thus, Applicants respectfully submit that claim 9 is allowable for at least the same reasons given above with respect to claim 1.

Claims 2-3 stand rejected under 35 U.S.C. § 103(a) as being anticipated by Sekiya in view of Fox in further view of U.S. Patent Publication 2004/0241093 to Lauenstein et al. (hereinafter “Lauenstein”). (See 09/05/2007 Office Action, p. 4-6). Applicants respectfully submit that Lauenstein does not cure the deficiencies of Sekiya or Fox with respect to claim 1. Because claims 2-3 depend from, and therefore include all the limitations of claim 1, it is respectfully submitted that these claims are also allowable for at least the same reasons given above with respect to claim 1.

Claims 4-5 and 7 stand rejected under 35 U.S.C. § 103(a) as being anticipated by Sekiya in view of Fox in view of Lauenstein in further view of U.S. Patent No. 6,560,476 to Pelletier et al. (hereinafter “Pelletier”). (See 09/05/2007 Office Action, p. 6-8). Applicants respectfully submit that Pelletier does not cure the deficiencies of Sekiya, Fox or Lauenstein with respect to claim 1. Because claims 4-5 and 7 depend from, and therefore include all the limitations of claim 1, it is respectfully submitted that these claims are also allowable for at least the same reasons given above with respect to claim 1.

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being anticipated by Sekiya in view of Fox in view of Lauenstein in further view of U.S. Patent Publication 2001/0025142 to Wessels et al. (hereinafter “Wessels”). (See 09/05/2007 Office Action, p. 9). Applicants respectfully submit that Wessels does not cure the deficiencies of Sekiya, Fox or Lauenstein with respect to claim 1. Because claim 6 depends from, and therefore includes all the limitations of claim 1, it is respectfully submitted that these claims are also allowable for at least the same reasons given above with respect to claim 1.

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being anticipated by Sekiya in view of Fox in view of U.S. Patent No. 5,803,914 to Ryalls et al. (hereinafter “Ryalls”) in further view of U.S. Patent Publication 2003/0065258 to Gupta et al. (hereinafter “Gupta”). (See 09/05/2007


Office Action, p. 9-11). Applicants respectfully submit that neither Ryalls nor Gupta cure the deficiencies of Sekiya or Fox with respect to claim 1. Because claim 8 depends from, and therefore includes all the limitations of claim 1, it is respectfully submitted that these claims are also allowable for at least the same reasons given above with respect to claim 1.

**CONCLUSION**

In light of the foregoing, Applicants respectfully submit that all of the now pending claims are in condition for allowance. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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